



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,521	07/28/2003	Stephen R. Elgin II	15NM5686	1520
27256	7590	06/14/2005	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			ROJAS, BERNARD	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,521

Applicant(s)

ELGIN ET AL.

Examiner

Bernard Rojas

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 4/1/05 have been fully considered but they are not persuasive. Herndon et al. (2004/0051612 A1). teaches varying the parameters in the wet winding process will yield different material properties. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a different type of resin to make the pockets and spacers than the resin used for the base in order to change their material properties [strength, temperature resistance, etc.] of the base in respect to the pockets and spacers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2832

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herndon et al. (2004/0051612 A1).

Claim 1, Herndon et al. discloses a method of fabricating a superconducting magnet coil support structure comprising: designing a preformed support tooling for the superconducting magnet coil support structure (180); fabricating said preformed support tooling (182); performing a wet winding process to form said superconducting magnet coil support structure comprising (184); winding a first resin material onto said preformed support tooling to form a base; and applying a second resin material onto said base to form a plurality of spacers and a plurality of pockets on said base; and curing said superconducting magnet coil support structure (186); and removing said preformed support tooling from said superconducting magnet coil support structure (190, Figure 5).

Herndon et al. fails to specifically teach that the second resin material is different from the first resin material, but teaches varying the parameters in the wet winding process will yield different material properties.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a second resin material as suggested by Herndon et al. [paragraph 39] in order to obtain the desired material properties for various components.

Claim 2, Herndon et al. discloses a method as in claim 1 wherein the step of designing said preformed support tooling further comprising: determining dimensions of the superconducting magnet; determining dimensions of space available for said superconducting magnet coil support structure; determining a mounting configuration of said superconducting magnet coil support structure; designing dimensions of said superconducting magnet coil support structure to accommodate for said dimensions of said superconducting magnet, said dimensions of space available, and said mounting configuration; and designing dimensions of said preformed support tooling (paragraphs 6-8).

Claim 3, Herndon et al. discloses a method as in claim 1 wherein the step of performing a wet winding process further comprises: winding prepreg onto said preformed support tooling to form a base; and applying fiber cloth onto said base to form a plurality of spacers and a plurality of pockets on said base (paragraph 31).

Claim 4, Herndon et al. discloses a method as in claim 1 wherein the step of performing a wet winding process further comprises: winding said first resin material onto said preformed support tooling to form a base; then inserting said base into a vacuum chamber; curing said base; and applying said second resin material onto said base (paragraph 40).

Claim 5, Herndon et al. discloses a method as in claim 1 wherein applying a first resin material and applying a second resin material comprises applying a resin material selected from fiberglass tape with epoxy (paragraph 5-6).

Claim 6, Herndon et al. discloses a method as in claim 1 wherein the step of performing a wet winding process further comprises winding fiber cloth having strands of fiber onto said preformed support tooling (paragraphs 5-6).

Claim 7, Herndon et al. discloses a method as in claim 6 wherein the step of winding fiber cloth onto said preformed support tooling further comprises varying the widths of said fiber cloth to form said plurality of spacers and said plurality of pockets (paragraphs 5-6).

Claim 8, Herndon et al. discloses a method as is claim 7 where the step of forming said plurality of spacers further comprises making the dimensions and geometry of said plurality of spacers to the dimensions and geometries, respectively, of gaps between superconducting magnet coils [paragraph 31].

Claim 9, Herndon et al. discloses a method as is claim 7 where the step of forming said plurality of pockets further comprises making the dimensions and geometry of said plurality of pockets to Q the dimensions and geometries of said superconducting magnet [paragraph 31].

Claim 10, Herndon et al. discloses a method as in claim 6 wherein the step of winding fiber cloth is performed by a computer numerically controlled (CNC) multi-axis winder (paragraph 38).

Claim 11, Herndon et al. discloses a superconducting magnet coil support structure formed according to the method of claim 1 (Figures 2 and 3).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bernard Ryzni
Br

[Signature]
SPE - AM2#32
06/13/15